REMARKS

In response to the Office Action mailed June 7, 2006, Applicants request reconsideration of this application in view of these remarks. The rejections under § 103 and the rejections for double patenting are traversed.

I. Each Claim Limitation has not been Shown in the Prior Art

Regarding the rejection under 35 U.S.C. § 103 over Krom (U.S. 6,437,050) in view of Demirors (U.S. 6,441,090) of claims 10-15, 17, and 23, independent claim 10 recites: "wherein said nanoparticles are comprised of said second monomer units and said first monomer units, in a ratio of said second monomer units to said first monomer units greater than 1:1." The Office Action completely fails to address the limitation of "a ratio of said second monomer units to said first monomer units greater than 1:1." Therefore, the rejection does not establish a *prima facie* case of obviousness, which requires that the references much teach or suggest all the claim limitations.

Regarding the rejection of claim 16 under 35 U.S.C. § 103 over Krom and Demirors in further view of Coolbaugh (U.S. 5,399,629) or Wang '469 (U.S. 6,689,469), neither Coolbaugh nor Wang '469 remedy the deficiencies of Krom and Demirors noted above. Therefore, claim 16 is also believed to be patentable over the cited art.

Regarding the rejections under 35 U.S.C. § 103 over Wang '785 (U.S. 6,872,785) in view of Demirors of claims 10-17, and 23, again, the Office Action completely fails to address the limitation in claim 10 of "a ratio of said second monomer units to said first monomer units greater than 1:1." Accordingly, Applicants request that the rejection be withdrawn and the case

be passed to issue or a new non-final office action be issued that is complete and addresses this limitation of the claims.

II. There is No Motivation to Combine

In addition, the rejections are traversed because there is no motivation to combine the polymodal size distribution of Demirors with the disclosures of Krom or Wang '785. Applicants reassert that there is substantial teaching away in Demirors from Krom or Wang '785 as discussed in the previous response. Furthermore, The Office Action states that there is a motivation to combine these references because the anionic polymerization processes of both Krom and Wang '785 are analogous to the process of Demirors, the desired bimodal rubber particle size distribution depends on techniques of mass polymerization, and the conditions are similar for producing the desired average particle sizes and the desired properties of the resulting polymer composition. Applicants contest these bases for a motivation to combine.

Contrary to the Office Action, the polymerization process described in Demirors is quite different than the process described in Krom and Wang '785. Demirors polymerizes by using a feed of the desired components and a grafting initiator in a series of reactors (Demirors Col. 4, Lines 50-53). The smaller particles are formed in a first reactor, and then transferred to a second reactor, wherein larger particles are formed by controlling the "agitation and solids content in the second reactor." (Col. 5. Lines 1-3.) Polymerization is done by grafting polymer to rubber particle (Col 5, Lines 6-8) with initiators such as peroxides or photochemical techniques (Col 5, Lines 4-20). Krom and Wang '785 disclose an anionic, micellar, self-assembly polymerization process that is quite different from that disclosed in Demirors.

Furthermore, contrary to the Office Action, the desired properties of the resulting polymer compositions are also different in Krom and Wang '785 than they are in Demirors. The specification of Krom is primarily directed to improving tensile strength and tear strength primarily in rubber compositions (Krom, Col. 6, Lines 64-67), and Wang '785 is directed to improving hysteresis, tensile strength, tear strength, resistance to creep, resistance to termperature, and aging properties. (Wang '785, Col. 2, Lines 23-26.) In contrast, Demirors is directed to improving impact strength and gloss in injection molding and extrusion applications (Col. 2: lines 20-24) such as HIPS or ABS (Col. 6, lines 7-44).

Accordingly, Applicants submit that the above arguments adequately rebut the reason given in the Office Action as a motivation to combine. In sum, one of skill in the art would not be motivated to combine the polymodal aspect of Demirors with the inventions disclosed in Krom or Wang '785, which prefer monomodal dispersity, use a different process, and obtain an end product with different properties. Therefore, Applicants submit that claims 10-17 and 23 are also patentable over the cited prior art for this reason.

III. Response to Double Patenting Rejections

Claims 10-17 and 23 were rejected for non-statutory Double Patenting over the combination of Wang '785 in view of Demirors. The arguments stated above apply with equal force against this rejection, *i.e.* the Office Action does not address all the claim limitations, and there is no motivation to combine Demirors with Wang '785.

Regarding the failure to show that all claim limitations are taught by the references, the claim limitation of "a ratio of said second monomer units to said first monomer units greater than 1:1," has not been addressed at all. Furthermore, there is also no motivation to combine Wang

'785 with Demirors, because the processes of Krom and Wang '785 are not analogous to that of Demirors.

IV. Conclusion

For the foregoing reasons, the Office Action fails to establish a *prima facie* case of obviousness, and there is no motivation to combine the references. Applicants respectfully request that the rejections be withdrawn and that this case be passed to issue, or at very least that a non-final Office Action be issued that points to the claim limitation "a ratio of said second monomer units to said first monomer units greater than 1:1" in some reference, and provides a motivation to combine, so that Applicants will have a fair opportunity to reply.

Respectfully submitted,

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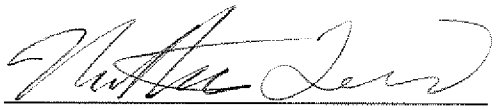

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